



DHEC's Office of Solid Waste Reduction and Recycling For Your Information...

Used Oil Recycling 101

We love to drive. To the supermarket, to the mall, to the post office, to school, to see friends, to get a pizza, to our job, to our vacation at the beach or mountains and to a million places in between. We get in the car, buckle up and hit the road every day.

There are many responsibilities related to that privilege. Safety, for example. Car crashes are the No. 1 killer of teenagers. Buckle up. Slow down. Be careful out there.

Another responsibility often forgotten is the environmental impact of driving. Cars and trucks, for example, release pollutants into the air. Cars and trucks use energy.

And cars and trucks use motor oil. It's a fact of life. It's driven into you the moment you begin to drive: you have to change your oil periodically to maintain your vehicle and ensure that it runs properly. That's a lot of oil. In fact, about 1.1 billion gallons of motor oil are sold annually in the United States according to the American Petroleum Institute (API).

What do you do with your used motor oil after you change it? What can you do with it? What happens to it?

Recycling motor oil is the law in South Carolina.

That's right. In South Carolina, it's the law. The S.C. Solid Waste Policy and Management Act of 1991 (Act) banned the disposal of motor oil in municipal solid waste (MSW) landfills after May 27, 1992. The Act prohibits the disposal of oil into sewers, drainage systems, septic tanks, surface water or groundwater and on the ground. The Act also prohibits the use of oil for road oiling, dust control, weed abatement and other uses that have the potential to harm the environment.

It must be recycled. If you have your oil changed for you (at a car dealership, garage or quick lube), your used motor oil is recycled by that business. If you are a do-it-yourselfer (DIYer - an individual who changes oil in a personal vehicle), you must recycle that used motor oil.

Why recycle oil?

- **Recycling used motor oil protects human health and the environment.** Recycling used motor oil keeps it from contaminating soil, keeps it out of rivers, lakes, streams and groundwater, and keeps it away from the beach, aquatic life and wildlife. The potential harm that improperly disposed of used oil may cause is staggering. One gallon of used motor oil improperly disposed of may contaminate 1 million gallons of fresh water - enough to supply 50 people with drinking water for one year. One pint of used motor oil improperly disposed of can create a one-acre slick on the surface of a body of water and kill floating aquatic organisms.
- **Recycling used motor oil also saves valuable energy.** Two gallons of used motor oil can generate 36-kilowatt hours of electricity. That's enough to run an average household for a day, cook 36 meals in a microwave, blow dry your hair 216 times, vacuum your house for 15 months or run your television for 180 hours.
- **Recycling used motor oil also helps us reduce dependency on foreign oil.** Oil is the No. 1 source of energy for the U.S., supplying about 40 percent of the nation's overall energy needs according to the API. About half of the oil we consume is produced here in the U.S. while the rest is imported.



What happens to recycled motor oil?

Recycled motor oil can be used in a variety of ways. About 14 percent of the used motor oil collected nationwide is re-refined for use as a new generation of motor oil or as fuel oils according to the API. About 75 percent is reprocessed for use in asphalt plants, industrial and utility boilers, steel mills and other facilities. About 11 percent is used in specially designed space heaters in automotive bays and municipal garages. The oil helps these types of facilities reduce their heating costs. This practice, however, is not recommended for home use.

Santee Cooper, the state-owned utility, burns most of the oil collected in South Carolina for energy recovery to generate electricity. Santee Cooper estimated that it saved about \$1 million in 2002 by burning used motor oil instead of buying fuel. The utility also estimates that it has collected about 10 million gallons of used motor since 1990 (collected from DIYers and businesses) enough to provide electricity for 1,000 average homes for 10 years.

South Carolina has a slick program targeting DIYers.

The API estimates that more than 50 percent of all motorists are DIYers. The U.S. Environmental Protection Agency (U.S. EPA) estimates that the largest single source of oil pollution harming our nation's waters is from DIYers. In fact, it is estimated that about 185 million gallons of used motor oil are improperly disposed each year and poured in storm drains or the sewer, dumped on the ground and tossed in the trash.

The good news and no, great news in South Carolina is that the state has developed one of the nation's best and most comprehensive programs targeting DIYers. A used oil recycling program for DIYers began in South Carolina in 1990 when Santee Cooper collected nearly 3,000 gallons of used oil from eight locations. In 1991, Santee Cooper expanded the Give Oil for Energy Recovery (GOFER) program throughout the state. Following the passage of the Act, the S.C. Department of Health and Environmental Control's (DHEC) Office of Solid Waste Reduction and Recycling (Office) began providing grant funding and technical assistance to local governments to set up used motor oil recycling centers. The combined efforts have resulted in one of the nation's top overall programs.

In calendar year 2002, DIYers in South Carolina recycled 1,160,865 gallons of used motor oil at more than 700 collection sites throughout the state. Since 1990, more than 9 million gallons of used motor oil has been collected from DIYers. The amount of used oil collected from DIYers, which has surpassed the 1 million gallon mark every year since 1999, has increased 12 consecutive years.

Used motor oil filters and bottles also are collected from DIYers in most counties. Used motor oil filters are banned from MSW landfills unless they are drained or crushed to their smallest practical volume. The used motor oil filter recycling program began in 1994 with just three counties collecting 45,028 filters. In 2002, 42 counties collected about 320,000 filters or about 210 tons of filters. This is an important part of the overall recycling program because filters can contain four ounces to one quart of oil. Most of the filters recycled in South Carolina are sent to several steel mills located in the state and made into new steel products.

South Carolina became one of the first states to collect used motor oil bottles, beginning a program in 1995 with two counties (Charleston and Lexington). Bottles are an important target for recycling for two reasons. First, oil bottles are made from a plastic that is recyclable in most local programs. Second, each bottle can contain as much as one ounce of oil that should be recovered before recycling. In 2002, 38 counties collected more than 92 tons of used motor oil bottles. In addition the program offers recycling locations for farmers and for oil/gasoline mixtures.

For more information about the recycling of used motor oil, filters or bottles in South Carolina including the nearest collection site, please call the Office at **1-800-768-7348** or visit **www.scdhec.gov/recycle**.

DID YOU KNOW? There were more than 190 million licensed drivers in the United States who drove on average about 14,600 miles in 2000 according to the U.S. Department of Transportation. In South Carolina, there were more than 2.8 million licensed drivers who drove on average more than 16,000 miles in 2000. That means, just here in South Carolina, all of us drove more than 44.8 billion miles.

USED OIL FACT: Local governments run most of the 700 used motor oil collection sites in South Carolina, but Advance Auto Parts, Auto Zone, Jiffy Lube and Evans Fast Lube stores also collect used motor oil from DIYers.

GREEN DRIVER PROJECT: This project, offered by the Office, targets high school driver education classes on the environmental impact of driving, including used oil recycling, energy conservation, litter prevention as well as air and water protection. For more information, call **1-800-768-7348**.



Office of Solid Waste Reduction and Recycling
1-800-768-7348
www.scdhec.gov/recycle

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